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**UTILITY PATENT APPLICATION TRANSMITTAL**  
**(Large Entity)***(Only for new nonprovisional applications under 37 CFR 1.53(b))*

Docket No.

97-059-1X

Total Pages in this Submission

86

**TO THE ASSISTANT COMMISSIONER FOR PATENTS**

Box Patent Application

Washington, D.C. 20231

Transmitted herewith for filing under 35 U.S.C. 111(a) and 37 C.F.R. 1.53(b) is a new utility patent application for an invention entitled:

**METHOD AND APPARATUS FOR PROVIDING AND PROCESSING INSTALLMENT PLANS AT A TERMINAL**

and invented by:

**Jay S. WALKER; James A. JORASCH; Andrew S. VAN LUCHENE**

If a **CONTINUATION APPLICATION**, check appropriate box and supply the requisite information:

☒ **Continuation** ☐ **Divisional** ☐ **Continuation-in-part (CIP)** of prior application No.: 09/264,379

Which is a:

☐ **Continuation** ☒ **Divisional** ☐ **Continuation-in-part (CIP)** of prior application No.: 08/946,508

Which is a:

☐ **Continuation** ☐ **Divisional** ☒ **Continuation-in-part (CIP)** of prior application No.: 08/920,116

Enclosed are:

**Application Elements**

1. ☒ Filing fee as calculated and transmitted as described below
2. ☒ Specification having 41 pages and including the following:
  - a. ☒ Descriptive Title of the Invention
  - b. ☒ Cross References to Related Applications *(if applicable)*
  - c. ☐ Statement Regarding Federally-sponsored Research/Development *(if applicable)*
  - d. ☐ Reference to Microfiche Appendix *(if applicable)*
  - e. ☒ Background of the Invention
  - f. ☒ Brief Summary of the Invention
  - g. ☒ Brief Description of the Drawings *(if drawings filed)*
  - h. ☒ Detailed Description
  - i. ☒ Claim(s) as Classified Below
  - j. ☒ Abstract of the Disclosure

# UTILITY PATENT APPLICATION TRANSMITTAL (Large Entity)

(Only for new nonprovisional applications under 37 CFR 1.53(b))

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## Application Elements (Continued)

3. ☒ Drawing(s) (when necessary as prescribed by 35 USC 113)
- a. ☒ Formal                      Number of Sheets      20 Sheet Figs. 1-15
- b. ☐ Informal                      Number of Sheets      \_\_\_\_\_
4. ☒ Oath or Declaration
- a. ☐ Newly executed (original or copy)      ☐ Unexecuted
- b. ☒ Copy from a prior application (37 CFR 1.63(d)) (for continuation/divisional application only)
- c. ☒ With Power of Attorney      ☐ Without Power of Attorney
- d. ☐ DELETION OF INVENTOR(S)  
Signed statement attached deleting inventor(s) named in the prior application,  
see 37 C.F.R. 1.63(d)(2) and 1.33(b).
5. ☒ Incorporation By Reference (usable if Box 4b is checked)  
The entire disclosure of the prior application, from which a copy of the oath or declaration is supplied under Box 4b, is considered as being part of the disclosure of the accompanying application and is hereby incorporated by reference therein.
6. ☐ Computer Program in Microfiche (Appendix)
7. ☐ Nucleotide and/or Amino Acid Sequence Submission (if applicable, all must be included)
- a. ☐ Paper Copy
- b. ☐ Computer Readable Copy (identical to computer copy)
- c. ☐ Statement Verifying Identical Paper and Computer Readable Copy

## Accompanying Application Parts

8. ☐ Assignment Papers (cover sheet & document(s))
9. ☐ 37 CFR 3.73(B) Statement (when there is an assignee)
10. ☐ English Translation Document (if applicable)
11. ☒ Information Disclosure Statement/PTO-1449      ☒ Copies of IDS Citations
12. ☒ Preliminary Amendment
13. ☒ Acknowledgment postcard
14. ☒ Certificate of Mailing
- ☐ First Class      ☒ Express Mail (Specify Label No.): EL510722390US

# UTILITY PATENT APPLICATION TRANSMITTAL (Large Entity)

(Only for new nonprovisional applications under 37 CFR 1.53(b))

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## Accompanying Application Parts (Continued)

15. ☐ Certified Copy of Priority Document(s) (if foreign priority is claimed)

16. ☒ Additional Enclosures (please identify below):

POSTCARD

## Fee Calculation and Transmittal

### CLAIMS AS FILED

For	#Filed	#Allowed	#Extra	Rate	Fee
Total Claims	22	- 20 =	2	x \$18.00	\$36.00
Indep. Claims	2	- 3 =	0	x \$78.00	\$0.00
Multiple Dependent Claims (check if applicable) <input type="checkbox"/>					\$0.00
BASIC FEE					\$690.00
OTHER FEE (specify purpose)					\$0.00
TOTAL FILING FEE					\$726.00

- ☐ A check in the amount of \_\_\_\_\_ to cover the filing fee is enclosed.
- ☒ The Commissioner is hereby authorized to charge and credit Deposit Account No. **50-0271** as described below. A duplicate copy of this sheet is enclosed.
- ☒ Charge the amount of **\$726.00** as filing fee.
- ☒ Credit any overpayment.
- ☒ Charge any additional filing fees required under 37 C.F.R. 1.16 and 1.17.
- ☐ Charge the issue fee set in 37 C.F.R. 1.18 at the mailing of the Notice of Allowance, pursuant to 37 C.F.R. 1.311(b).

  
Signature

Nathaniel Levin  
Attorney for Applicants Reg. No.: 34,860  
203-461-7114  
22927

Dated: September 8, 2000

CC:

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:  
Jay S. Walker et al.  
Application No.: Not assigned  
Filed: September 8, 2000  
For: METHOD AND APPARATUS FOR  
PROVIDING AND PROCESSING  
INSTALLMENT PLANS AT A  
TERMINAL

) Group Art Unit: Not Assigned  
)  
) Examiner: Not Assigned  
)  
)  
) **PRELIMINARY AMENDMENT**  
)  
)  
) Attorney Docket No. 97-059-1X  
)  
) Walker Digital Corporation  
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) (203) 461-7114 /voice  
) (203) 595-8266/fax

CERTIFICATE OF MAILING BY EXPRESS MAIL

I hereby certify that this correspondence is being sent via Express Mail No. EL510722390US in an envelope with sufficient postage and addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231, on September 8, 2000.

Dated: 9/08/00 By: N. Sahadeo  
Nalini P. Sahadeo

Assistant Commissioner for Patents  
Washington, D.C. 20231

Dear Sir:

Please amend the above-identified patent application prior to examination on the merits and before calculation of the fee as follows:

**IN THE SPECIFICATION:**

Please amend the specification as follows:

At page 1, line 4, after "The present application is a", add --continuation of U.S. Patent Application Serial No. 09/264,379, which is a divisional of U.S. Patent Application Serial No. 08/946,508, now U.S. Patent No. 6,064,987, which is a--.

**IN THE CLAIMS:**

Please cancel claims 1-68 without prejudice.

Please add the following new claims:

- 1 69. A method for providing installment plan options, comprising:  
2 generating a purchase price at a POS terminal;  
3 generating a credit card number at the POS terminal;  
4 transmitting the purchase price and the credit card number from the POS  
5 terminal to the central controller;  
6 using the central controller to generate an installment plan for payment of the  
7 purchase price;  
8 transmitting data concerning the installment plan from the central controller to  
9 the POS terminal;  
10 generating at the POS terminal a selection signal to indicate whether the  
11 installment plan is accepted; and  
12 transmitting the selection signal from the POS terminal to the central controller.
- 1 70. The method of claim 69, further comprising displaying a signal indicative of the  
2 installment plan at the POS terminal.
- 1 71. The method of claim 70, further comprising receiving input from a customer at  
2 the POS terminal to indicate selection of the installment plan.
- 1 72. The method of claim 69, further comprising:

authorizing use of the installment plan for a financial account indicated by the credit card number, if the selection signal indicates acceptance of the installment plan.

73. The method of claim 69, wherein the step of using the central controller to generate an installment plan includes generating a plurality of installment plans, and the step of transmitting data concerning the installment plan includes transmitting data concerning the plurality of installment plans from the central controller to the POS terminal.

74. The method of claim 73 wherein the selection signal indicates acceptance of one of the plurality of installment plans.

75. The method of claim 69, further comprising:  
determining whether to allow installment payments on the purchase price;  
and wherein the step of using the central controller to generate an installment plan is performed only if installment payments on the purchase price are allowed.

76. The method of claim 75, wherein the determination of whether to allow installment payments is based on the purchase price.

77. The method of claim 76, wherein the step of determining whether to allow installment payments includes:  
comparing the purchase price to a predetermined amount; and  
allowing installment payments only if the purchase price exceeds the predetermined amount.

78. The method of claim 75, wherein the determination of whether to allow installment payments is based on whether an account indicated by the credit card number is pre-approved for installment payments.

79. The method of claim 69, further comprising:

transmitting a merchant identifier from the POS terminal to the central controller, the merchant identifier indicating a merchant; and crediting the purchase price to the merchant.

80. A system for providing installment plan options, comprising:  
a central controller; and  
a POS terminal in data communication with the central controller;  
the POS terminal being programmed to:  
generate a purchase price and a credit card number; and  
transmit the purchase price and the credit card number to the central controller;  
the central controller being programmed to:  
generate an installment plan for payment of the purchase price; and  
transmit data concerning the installment plan to the POS terminal;  
the POS terminal being further programmed to:  
generate a selection signal to indicate whether the installment plan is accepted; and  
transmit the selection signal to the central controller.

81. The system of claim 80, wherein the POS terminal displays a signal indicative of the installment plan.

82. The system of claim 81, wherein the POS terminal receives input from a customer to indicate selection of the installment plan.

83. The system of claim 80, wherein the central controller is programmed to authorize use of the installment plan for a financial account indicated by the credit card number, if the selection signal indicates acceptance of the installment plan.

1 84. The system of claim 80, wherein the central controller generates a plurality of  
2 installment plans and transmits to the POS terminal data concerning the plurality of  
3 installment plans.

1 85. The system of claim 84, wherein the selection signal indicates acceptance of  
2 one of the plurality of installment plans.

1 86. The system of claim 85, wherein the central controller determines whether to  
2 allow installment payments on the purchase price, and generates an installment plan  
3 only if installment payments on the purchase price are allowed.

1 87. The system of claim 86, wherein the determination of whether to allow  
2 installment payments is based on the purchase price.

1 88. The system of claim 87 wherein the determination of whether to allow  
2 installment payments is made by comparing the purchase price to a predetermined  
3 amount, and allowing installment payments only if the purchase price exceeds the  
4 predetermined amount.

1 89. The system of claim 86, wherein the determination of whether to allow  
2 installment payments is based on whether an account indicated by the credit card  
3 number is pre-approved for installment payments.

1 90. The system of claim 80, wherein the POS terminal transmits to the central  
2 controller a merchant identifier indicating a merchant, and the central controller credits  
3 the purchase price to the merchant.



## REMARKS

This amendment is being submitted concurrently with filing of the application. Claims 1-68 have been canceled without prejudice. Claims 69-90 are active. Claims 69 and 80 are independent. Please calculate the filing fees due based on the claims as amended herein.

The Examiner is kindly invited to contact Nathaniel Levin at telephone number (203) 461-7114 or through electronic mail at [nlevin@walkerdigital.com](mailto:nlevin@walkerdigital.com) with any questions or comments regarding the present application.

Please charge any additional fees that may be required for this Amendment, or credit any overpayment to Deposit Account No. 50-0271.

Respectfully submitted,



September 8, 2000  
Date

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METHOD AND APPARATUS FOR PROVIDING AND PROCESSING  
INSTALLMENT PLANS AT A TERMINAL

The present application is a continuation-in-part of co-pending Patent Application  
5 No. 08/920,116, attorney docket no. WD2-97-054, entitled "METHOD AND SYSTEM FOR  
PROCESSING SUPPLEMENTARY PRODUCT SALES AT A POINT-OF-SALE  
TERMINAL", filed on August 26, 1997, a continuation-in-part of Patent Application No.  
08/822,709, attorney docket no. WD2-97-006, entitled "SYSTEM AND METHOD FOR  
PERFORMING LOTTERY TICKET TRANSACTIONS UTILIZING POINT-OF-SALE  
10 TERMINALS", filed on March 21, 1997.

FIELD OF THE INVENTION

The present invention relates to methods and apparatus for providing and  
processing installment plan options.

BACKGROUND OF THE INVENTION

Many purchasers are often unable or unwilling to pay for a desired purchase. The  
purchase may be, for example, a single high-priced item or a number of lower-priced items that  
together have a high purchase price. Unfortunately, the purchase price may be more than the  
20 purchaser is able or willing to spend at the time of sale.

Credit card accounts can allow greater flexibility in paying for purchases. When a  
purchase is paid for with a credit card, the purchaser need not tender cash or otherwise  
immediately forego money. Instead, the purchaser must pay the issuer of the credit card account

within a predetermined period of time. Credit card accounts thereby allow purchasers to incur costs greater than those they are able to pay at the time of sale.

Costs that are "charged" (paid for using a credit card account) are added to a "balance" of the account. The purchaser may pay the balance with a single payment or in several smaller payments made over a period of time. Many purchasers prefer paying several smaller payments, instead of a single, larger payment. In return for allowing the purchaser to pay over a period of time, the issuer imposes interest on the balance. Typically, the balance is incremented by a predetermined interest rate at regular intervals, such as each month. In summary, payment amounts are subtracted from the balance, while interest and additional charged costs are added to the balance.

Each credit card account typically has a balance limit that is set by the issuer in order to deter or prevent a purchaser from incurring an unduly high balance. Exceeding the balance limit may not be allowed, or may impose a substantial penalty fee. Without such a balance limit, a purchaser may charge so many costs that the balance becomes unduly high. Consequently, the purchaser may not be able or willing to pay for the balance, and thus the issuer will not receive payments that are due.

The restrictions imposed by the balance limit are another reason why many purchasers are often unable or unwilling to pay for a desired purchase. Many purchasers are reluctant to maintain a balance that is near the balance limit, for fear of exceeding the balance limit. In addition, the purchaser may worry that a necessary but unanticipated purchase may not be allowed. For example, if a credit card account has a balance limit of \$5,000 and a balance of \$4,500, an "emergency" purchase of \$1000 may not be allowed if exceeding the balance limit is forbidden.

Some sellers allow selected items to be paid for in a number of periodic payments ("installments"), rather than in one payment at the time of sale, as is more common. In return, the seller typically imposes a rate of interest on the purchase price, and interest thereby forms a part of each installment payment. For example, a seller may allow purchasers to pay for a \$100 item with three installments of \$35 per month. The seller receives  $3 \times \$35 = \$105$  after the three installments are paid, which represents the \$100 purchase price and \$5 interest. Such smaller periodic payments are preferable to many purchasers, who may not be able to pay a single large payment.

Unfortunately, such installment-type payment plans ("installment plans") suffer from several drawbacks. For example, a seller must be assured that a purchaser is financially reliable, otherwise one or more installments may not be received. Therefore, the purchaser typically must obtain and complete a credit application, undergo a credit check and await credit approval, which is annoying and inconvenient to the purchaser.

The seller is likewise inconvenienced by establishing such installment plans, processing credit applications, policing nonpayment of installments and incurring various other expenses. It is inconvenient to bill each month, and economically unfeasible to bill each month for small amounts. In addition, it is difficult for a seller to collect bad debt (unpaid installments), especially since most sellers are not accustomed to collecting bad debt.

Overall, such installment plans can be expensive for the seller and annoying to the purchaser. Consequently, not all sellers allow installment payments, and those that do typically allow installment payments only for a limited selection of high-priced items, rather than for each item. Sellers rarely, if ever, allow installment payments on lower-priced purchases since the benefits to the seller are believed to be outweighed by the costs.

Banco Bilbao Vizcayo ("BBV") is a credit card issuer that allows some purchasers to pay their account balances in installments. A purchaser negotiates via telephone with a BBV representative to establish an acceptable installment plan, if possible, at a time after purchases are paid for. Since the installment plan is established after purchases are paid for, the purchaser does not know at the time of sale whether installment payments will even be allowed. In addition, the purchaser does not know at the time of sale what interest rate will be applied if installment payments are allowed. Consequently, at the time of sale the purchaser may not be able to determine whether the purchase price is acceptable, even with an installment plan. In summary, negotiating with BBV to pay for an existing balance in installments cannot permit purchasers to make informed purchasing decisions at the time of sale.

Many banks provide loans, wherein the loan may be used to pay for various purchases. Such loans are typically repaid in fixed installments. Unfortunately, requesting and obtaining such loans is expensive and time-consuming, and loans may not be dispensed frequently. In addition, interest accumulates on the entire loan amount, so it is not efficient to use such loans to pay for frequent and varying purchases.

Some credit card issuers offer pre-approved loans in which installment payments of the loan are applied to the credit card account balance. Such pre-approved loans are typically offered only to purchasers with strong credit histories. In addition, the offered loan is typically a large amount of money, such as thousands of dollars. Thus, as described above, it is not efficient to use such loans to pay for frequent and varying purchases. Accordingly, the usefulness of such a loan is limited for smaller purchase prices.

It would be advantageous to provide a method and apparatus that allowed purchasers to pay for a variety of purchases in installments. Such a method and apparatus would ideally overcome the drawbacks of known installment plans.

## 5 SUMMARY OF THE INVENTION

It is an object of the present invention to provide methods and apparatus for allowing purchasers to select an installment plan for purchases at a time of sale.

10 In accordance with the present invention, a central controller receives from a POS terminal a purchase price and a financial account identifier. The financial account identifier specifies a financial account, such as a credit card account. The central controller, in turn, generates one or more installment plan identifiers indicating installment plans for payment of the purchase price. The installment plan identifiers are based on the purchase price and/or the financial account identifier. For example, certain accounts or certain high purchase prices may merit preferred installment plans. The installment plan identifiers are transmitted to the POS  
15 terminal.

A purchaser at the POS terminal selects whether he would like to pay for his purchase in installments and, if so, using which installment plan. The POS terminal generates a selection signal indicative of whether to accept any of the installment plans. In other words, the selection signal indicates a selected one of the installments plans (if the purchaser desires to pay  
20 in installments) or that no installment plan was selected. The POS terminal then transmits the selection signal to the central controller.

The central controller receives the selection signal. If the selection signal indicates acceptance of any installment plan, use of the accepted installment plan for the

financial account is authorized. Thereafter, bills are generated which reflect installment charges to be paid. Thus, the purchaser may afford more purchases than otherwise possible, and may utilize such installment payments for purchases bought at many sellers.

## 5 BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a schematic illustration of an apparatus for providing installment plan options provided in accordance with the present invention.

FIG. 2 is a schematic illustration of a store of the apparatus of FIG. 1.

FIG. 3 is a schematic illustration of a POS terminal of the store of FIG. 2.

10 FIG. 4 is a schematic illustration of a central controller of FIG. 1.

FIG. 5A is a schematic illustration of a purchaser database of the central controller of FIG. 4.

FIG. 5B is a schematic illustration of a transaction database of the central controller of FIG. 4.

15 FIG. 5C is a schematic illustration of an installment plan database of the central controller of FIG. 4.

FIG. 5D is a schematic illustration of a record of a purchaser billing database of the central controller of FIG. 4.

20 FIG. 5E is a schematic illustration of an installment payments database of the central controller of FIG. 4.

FIG. 5F is a schematic illustration of a merchant database of the central controller of FIG. 4.

FIG. 6 is a schematic illustration of exemplary records of the databases of FIGS. 5A through 5F.

FIG. 7 is a flowchart illustrating a process for allowing a purchaser to select an installment plan.

5 FIG. 8 is a flowchart illustrating steps of the process of Fig. 7 that are performed by a POS terminal.

FIG. 9 is a flowchart illustrating steps of the process of Fig. 7 that are performed by a central controller.

10 FIG. 10 is a flowchart illustrating a process for determining one or more installment plans to offer a purchaser.

FIG. 11 is a schematic illustration of a card reader of a POS terminal.

FIG. 12 is an exemplary bill generated in accordance with the present invention.

FIG. 13 is a flowchart illustrating a process for determining and offering a rebate to a purchaser.

15 FIG. 14 is a flowchart illustrating a process for determining and offering an upsell to a purchaser.

FIG. 15 is a flowchart illustrating a process for providing frequent flyer miles to a purchaser paying in installments.

## 20 DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

The present invention provides a purchaser at a point-of-sale terminal with options for paying for a purchase. The purchaser selects between (i) charging the entire purchase price at the time of sale, as is common; and (ii) charging a number of installments at periodic



intervals. Thus, the present invention allows credit card users to choose installment plans at the time of sale, thereby allowing purchasers to pay for many more purchases without exceeding the corresponding balance limit. Even after making high-priced purchases, a balance limit is not reached as easily, and thus much more credit remains available. Purchasers may even be able to pay for high-priced purchases that would have otherwise been unaffordable.

The credit card issuer or credit card clearinghouse typically provides and manages such installment plans, so sellers need not incur any charges associated with establishing and administering installment plans. Yet, purchasers may take advantage of installment plans at any seller that allows credit card purchases, and are not limited to selected items. Thus, the seller receives additional cash flow from selling additional items, and replacement inventory may be quickly acquired.

When establishing a credit card account for a purchaser, the issuer typically performs a credit check to determine a score indicating the purchaser's "credit worthiness." The balance limit is then set according to the credit worthiness, and may be adjusted thereafter. The credit card issuer thus already has credit information for the purchaser, and has presumably employed that information in (i) granting the credit card account to the purchaser, (ii) setting the account balance limit, and/or (iii) setting an interest rate of the account. Thus, in the present invention no additional costs need be incurred in reevaluating the credit worthiness of the purchaser.

Further, the present invention does not require any additional effort by the seller, who typically has no information on the credit-worthiness of the purchaser. The seller receives the full purchase price at the time of purchase regardless of whether the purchaser chooses to pay his credit card account balance in installments, so the seller is not disadvantaged. In addition,

since the seller need not perform any additional steps in offering installment plans, purchasers may take advantage of the present invention when paying for items from any seller that permits credit card transactions.

Of further benefit is that after being exposed to the installment options, the purchaser learns to associate corresponding monthly payment amounts with a purchase price. Thus, the purchaser can eventually become able to determine whether an item is likely to be affordable, even before the POS terminal provides installment plan options for a specific purchase.

Referring to Fig. 1, an apparatus 10 comprises a central controller 12 connected to each of stores 14, 16 and 18. As described in detail below, the stores 14, 16 and 18 are sellers that accept credit card transactions by purchasers, and the central controller 12 provides the stores 14, 16 and 18 with installment plan options for the purchasers at the time of sale.

Although three stores are shown in FIG. 1, it will be understood by those skilled in the art that the invention is applicable to one or more stores. The central controller 12 may be, for example, a controller of (i) a credit card issuer, such as Citibank Corporation; (ii) a credit card clearinghouse, such as First Data Corporation, or (iii) a store-specific (closed network) controller, such as a controller that administers transactions on J.C. Penney credit cards.

Referring to Fig. 2, the store 14 of Fig. 1 is illustrated in more detail. Stores 16 and 18 (Fig. 1) are similar to the store 14, and so a detailed illustration of each is omitted. The store 14 comprises POS terminals 20, 22 and 24, each connected to the central controller 12. The POS terminals 20, 22 and 24 are typically cash registers or other devices at which credit cards or ATM cards are used in paying or receiving money. Accordingly, the POS terminals 20, 22 and 24 accept input from credit cards or other financial accounts, and communicate with the

central controller 12 to effect the use of financial accounts in paying for purchases. One or more POS terminals may be included in the store 14 and connected to the central controller 12.

Fig. 3 illustrates the POS terminal 20 of Fig. 2 in more detail. POS terminals 22 and 24 (Fig. 2) are similar to the POS terminal 20, and so a detailed illustration of each is omitted. The POS terminal 20 comprises a POS processor 30, such as one or more conventional microprocessors, which is connected to each of a card reader 32 for reading input from credit cards and a data storage device 34, such as a RAM, floppy disk, hard disk or combination thereof. The POS processor 30 is also connected to the central controller 12 of Fig. 1.

The POS processor 30 and the storage device 34 may each be (i) located entirely within a single computer or other computing device; (ii) connected to each other by a remote communication link, such as a serial port cable, telephone line or radio frequency transceiver; or (iii) a combination thereof. For example, the POS terminal 20 may comprise one or more computers connected to a remote server computer for maintaining databases. The card reader 32 may be any of several known devices that allow a credit card to be passed ("swiped") therethrough, thereby permitting information stored on the credit card to be read. One such card reader is an OMNI 490, sold by VeriFone Inc.

The storage device 34 stores (i) a program 36 for controlling the POS processor 30, and (ii) an inventory database 38 for storing item prices. The program 36 drives the POS processor 30 to operate in a manner known in the art, and particularly to calculate item prices and aggregate those prices to determine purchases prices. The program 36 also includes program elements that may be necessary, such as "device drivers" for interfacing with the card reader 32 and/or computer peripheral devices. Appropriate device drivers and other necessary program elements are known to those skilled in the art, and need not be described in detail herein.

The inventory database 38 permits item prices to be determined, and thereby permits a purchase price of several items to be determined. In embodiments where there is more than one POS terminal for a store, the inventory database of each POS terminal may be stored on a single database server in communication with the POS processor of each POS terminal. Thus, each POS processor may access common item price data.

Fig. 4 illustrates the central controller 12 of Fig. 1 in more detail. The central controller 12 comprises a controller processor 40, such as one or more conventional microprocessors, which is connected to a data storage device 42, such as a RAM, floppy disk, hard disk or combination thereof. The controller processor 40, and thus the central controller 12, is further connected to the POS processors 20, 22 and 24 of Fig. 2. The controller processor 40 and the storage device 42 may each be (i) located entirely within a single computer; (ii) connected to each other by a remote communication link, such as a serial port cable, telephone line or radio frequency transceiver; or (iii) a combination thereof. For example, the central controller 12 may comprise one or more computers connected to a remote server computer for maintaining databases.

The storage device 42 stores (i) a program 44 for controlling the controller processor 40 in accordance with the present invention, and particularly in accordance with the processes described in detail below; (ii) a purchaser database 46 for storing purchaser records; (iii) a transaction database 48 for storing past credit card purchases; (iv) an installment plan database 50 for storing installment plan options; (v) a purchaser billing database 52 for storing billable charges; (vi) an installment payments database 54 for storing total installment payments made; and (vii) a merchant database 56 for storing merchant records.

The program 44 includes program elements that may be necessary, such as "device drivers" for interfacing with computer peripheral devices. Appropriate device drivers and other necessary program elements are known to those skilled in the art, and need not be described in detail herein. Each of the databases 46, 48, 50, 52, 54 and 56 are described in detail below and depicted with exemplary entries in the accompanying drawings. The schematic illustrations and accompanying descriptions of the databases presented herein are exemplary arrangements for the stored information. As will be understood by those skilled in the art, a number of other arrangements may be employed besides the tables shown in the drawings.

Referring to Fig. 5A, the purchaser database 46 stores entries 57, 58 and 59, each having a credit card account number 60 which uniquely indicates an account. Each of the entries 50, 52 and 54 further has a name 61, an address 62, an account balance limit 63 and an account balance 64. Each entry of the purchaser database 46 thus defines a credit card account and associated purchaser.

Referring to Fig. 5B, the transaction database 48 stores entries 70, 72 and 74, each having a transaction identifier 76 which uniquely indicates a credit card account transaction. Each of the entries 70, 72 and 74 further has a credit card account number 78 identifying an account on which the transaction occurred, a date of the transaction 80, an installment plan identifier 82 for indicating an installment plan, if any, applied to the transaction, a merchant identifier 84 specifying a merchant at which the transaction occurred, and a purchase price 86 of the transaction.

Referring to Fig. 5C, the installment plan database 50 stores entries 90, 92 and 94, each having an installment plan identifier 96 which uniquely indicates a different installment plan. Each of the entries 90, 92 and 94 further has a term 98 indicating the number of payments

to be made under the installment plan, an interest rate 100 of the installment plan, and a required purchase price 102 at which the installment plan may be utilized.

Referring to Fig. 5D, a record 108 of the purchaser billing database 52 (Fig. 4) illustrates billable transactions for an account defined by a credit card account number 109. A billable transaction is a charge that will typically appear on a purchaser's bill. For example, if a transaction having a purchase price of \$1,000 is to be paid for in installments, the total purchase price of \$1,000 does not appear as a charge on the bill. Instead, each of the installments appears as a charge on subsequent bills. Each such installment is generated based on the initial transaction purchase price, and stored in the purchaser billing database 52 (Fig. 4). In addition, since each of the installments are generated based on the initial transaction, it may be desirable that each installment have a transaction identifier related to that of the initial transaction. For example, if the initial transaction has a transaction identifier "555", the corresponding installments may have transaction identifiers "555-1", "555-2", and so on.

Typically, the purchaser billing database 52 (Fig. 4) includes a plurality of records such as the record 108. Each such record indicates the billable transactions for a different credit card account. The record 108 includes entries 110, 112 and 114. Each of the entries 110, 112 and 114 defines a billable transaction for the account, and is uniquely identified by a transaction identifier 116 corresponding to a transaction identifier 76 of the transaction database 48 (Fig. 5B). Accordingly, based on the transaction identifier 116, information corresponding to the transaction may be determined from the transaction database 48 (Fig. 5B). Alternatively, each of the entries 110, 112 and 114 may include corresponding information from the transaction database 48, such as the transaction date 118, the billable charge 120 and merchant identifier 122. Further, a transaction description 124 that describes the transaction may be stored. It will

be understood that the billable charge 120 represents an installment amount when the corresponding transaction is an installment payment.

Referring to Fig. 5E, the installment payments database 54 stores entries 130, 132 and 134, each corresponding to a transaction that has had an installment plan applied thereto.

- 5 Each of the entries 130, 132 and 134 has a credit card account number 136 indicating the account on which the transaction was made, a purchase price 138 of the transaction, a transaction identifier 140 uniquely identifying the transaction, and an installment plan identifier 142 indicating the applicable installment plan. Each of the entries 130, 132 and 134 further has a number of payments made 144 indicating the number of installments received for the transaction, and an installment amount 146 indicating the amount of each installment.
- 10

- Referring to Fig. 5F, the merchant database 56 stores entries 150, 152 and 154, each indicating a seller which may communicate with the central controller 12 (Fig. 1). Each of the entries 150, 152 and 154 has a merchant identifier 156 uniquely indicating each seller, a merchant name 158 and a merchant address 160. If the central controller is a controller which communicates with only one seller, the merchant database may not need to be used.
- 15

- Fig. 6 illustrates exemplary records used in establishing and utilizing an installment plan for a purchase. A purchaser database 200, which is an embodiment of the purchaser database 46 of Fig. 5A, stores an account “1111-1111-1111-1111”. A transaction database 210, which is an embodiment of the transaction database 48 of Fig. 5B, stores a transaction “130456” on the account “1111-1111-1111-1111”. As also illustrated by the transaction database 210, the transaction “130456” is for a purchase price of \$435.97 from a seller (merchant) “12456”, and is to be paid for using installment plan “B”. A merchant database
- 20

215, which is an embodiment of the merchant database 56 of Fig. 5F, stores a name and address of the seller “12456”.

An installment plan database 220, which is an embodiment of the installment plan database 50 of Fig. 5C, stores a description of the installment plan “B”. As illustrated in Fig. 6, purchase prices of between \$250 and \$1,000 may be paid for using installment plan “B”. Such purchase prices are repaid in 24 monthly installments at an interest rate of 15%.

A purchaser billing database 230, which is an embodiment of the purchaser billing database 52 of Fig. 4, stores a billable transaction for the account “1111-1111-1111-1111”. As illustrated, the billable transaction represents an installment payment of \$21.14 that is due in connection with the transaction “130456” illustrated in the transaction database 210. The billable transaction is identified by “130456-B-1”, indicating that it represents the first payment under installment plan “B” of the transaction “130456”.

An installment payments database 240, which is an embodiment of the installment payments database 54 of Fig. 5E, stores the number of payments made (zero payments) towards the transaction “130456”. Based on the number of payments made, it may be determined whether, or how many, installments remain to be paid. Therefore, based on the installment payments database 240, it may be determined whether additional billable transactions will appear on subsequent bills.

Referring to Fig. 7, a method 300 illustrates in simplified form an embodiment of a process for allowing a purchaser to select an installment plan for purchases at a time of sale. The method includes steps 302 that are performed by a POS terminal, as well as steps 304 that are performed by the central controller. A purchase is processed at a POS terminal (step 306) in a known manner. For example, one or more items are recorded at the POS terminal, and a



resulting purchase price is generated by retrieving and totaling the prices of each item.

Alternatively, an amount of money may be withdrawn at a POS terminal, such as an automated teller machine (ATM), and thus the generated purchase price is the withdrawn amount plus ATM fees, if any. A credit card account number is also generated, for example, by swiping a credit  
5 card through a card reader.

The purchase price and account number are transmitted to the central controller, which determines installment plan options (step 308) and generates corresponding installment plan identifiers. Each installment plan identifier indicates an installment plan for payment of the purchase price. For example, an installment plan identifier may be an interest rate and number of  
10 payment periods, or may be a pointer to an entry in a database where such information is stored.

The installment plan identifiers are transmitted to the POS terminal, providing the purchaser with the installment plan options to select. The purchaser selects one installment plan (step 310), if desired, and this selection is transmitted to the central controller. The selected installment plan, if any, is stored (step 312) and subsequently used in generating bills for the  
15 purchaser (step 314).

Fig. 8 illustrates a process 320 that describes in greater detail the steps of Fig. 7 which are performed by the POS terminal. As described above, the POS terminal generates a purchase price (step 322) and a financial account identifier (step 324), such as a credit card number, for specifying a financial account. The purchase price and the financial account  
20 identifier are transmitted to the central controller (step 326). The POS terminal may also transmit a merchant identifier specifying the seller controlling the POS terminal and/or product codes indicating each item.

In response, the POS terminal receives one or more installment plan identifiers, each specifying an installment plan for payment of the purchase price (step 328) and displays signals indicative of each installment plan. For example, the POS terminal may display monthly payment amounts and a number of months for each installment plan. The POS terminal

5 generates a selection signal indicative of whether to accept one of the installment plans (step 330). The selection signal thus indicates (i) a selected one of the installment plans, or (ii) that no installment plan was selected (e.g., if the purchaser does not wish to pay in installments). The selection signal may be generated by a single choice (e.g., selecting from “plan A”, “plan B” and “no plan”). Alternatively, the selection signal may include (i) a first selection indicating whether

10 an installment plan is desired, and (ii) a second selection indicating a selected installment plan if the first selection indicates the installment plan is desired. In such an embodiment, the central controller may transmit the installment plans identifiers to the POS terminal either before or after the first selection. The selection signal is then transmitted to the central controller (step 332).

Fig. 9 illustrates a process 340 that describes in greater detail the steps of Fig. 7

15 which are performed by the central controller. As described above, the central controller receives the purchase price and the financial account identifier from the POS terminal (step 342). The central controller then generates at least one installment plan identifier defining an installment plan for payment of the purchase price (step 344). As described in greater detail below, the installment plan, and thus the installment plan identifier, is based on at least one of the

20 purchase price and the financial account identifier. The installment plan identifier is then transmitted to the POS terminal (step 346).

The central controller then receives a selection signal indicative of whether to accept the installment plan (step 348). If the selection signal indicates acceptance of one

installment plan (step 350), use of the accepted installment plan for the financial account is authorized (step 352). When use of the accepted installment plan is authorized, the purchase price is to be repaid in installments, rather than charged on a single bill. Calculation of installments and charging those installments on bills are described in detail below.

5 Referring to Fig. 10, a process 360 is performed by the central controller in determining one or more installment plans to offer a purchaser at a POS terminal. In general, the central controller determines whether application of the purchase price to the financial account is authorized (step 362). The step 362 is also known as “authorizing the charge”, and typically comprises an evaluation of whether the credit card account meets approval criteria of the credit  
10 card account issuer. Approval criteria are specific to each issuer, and may include the following: (i) the account must be in good standing, and not past due; (ii) applying the purchase price to the current balance of the account would exceed the balance limit (some issuers may approve purchases that exceed the balance limit by a specified margin), (iii) the corresponding credit card must not have been reported stolen or lost; and (iv) the account should not be closed.

15 If the charge is authorized, the central controller determines whether to allow installment payments on the purchase price (step 364). Typically, the central controller makes the determination based on the purchase price and/or the financial account identifier. For example, the central controller may compare the purchase price to a predetermined amount, and allow installment payments only if the purchase price exceeds the predetermined amount. The  
20 central controller may also determine whether the specified account has been “pre-approved” such that installment payments are always allowed, e.g. as determined by a purchaser score. An indication of such pre-approval may be stored, for example, in the purchase database 46 (Fig. 4). In still another embodiment, each installment plan may have one or more conditions, and

installment payments are allowed if any installment plan's conditions are met. For example, one installment plan may have a condition that the purchase price is between \$250 and \$1,000, while a second installment plan has a condition that the total amount charged in the last month is over \$2,000. Such conditions may be stored in the installment plan database 50 (Fig. 4).

5                If installment payments are allowed, one or more installment plans are determined and offered to the purchaser (step 366), as described above. There are several different methods for determining installment plans to offer. For example, there may be a predetermined set of installment plans that is offered to every purchaser. In another embodiment, the set of offered installment plans may depend on the seller. Alternatively, there may be a set of installment plan  
10        identifiers stored for one or more purchaser entries in the purchaser database 46 (Fig. 4). In such an embodiment, the installment plan options would be "personalized" to each purchaser and the corresponding installment plans are in turn offered to that purchaser.

              Installment plan identifiers for each purchaser may be determined based on a score that is predictive of purchaser behavior. The score is determined in accordance with a  
15        scoring system. A scoring system is a mathematical model designed to provide probabilities of future performance based on the actual historic performance of a creditor. Models are developed from past behavior and data relationships, and the models are used to identify predictive variables. Scoring systems can be used as absolute decision tools or in combination with judgmental and expert system rules.

20                Credit card issuers currently use scores to determine: (i) who will respond to an offer; (ii) who will reliably repay credit; and (iii) who will generate revenue for an issuer. The above-described scores are known as (i) response scores, (ii) risk scores and (iii) revenue scores, respectively. Response scores are used to determine how to modify solicitations for maximum

results and for areas of the country that have the greatest growth potential for specifically designed card products, such as insurance or investment cross-sells. Risk scores are used to predict delinquencies and bankruptcies, as well as the extent and timing of monthly payments. Revenue scores are used in assigning a ranking to individuals by the relative amount of revenue they are likely to produce over a period of time following score assignment. Revenue scores help issuers to manage accounts by identifying inactive accounts that should be targeted with an appropriate offer, and by identifying the most desirable prospects for acquisition.

A score may be classified as either a “credit score” or a “behavior score.” A credit score is a statistical measure used by issuers to determine whether to extend credit in the form of a loan or as a credit line on a credit card account. Credit scores take into account many factors, including: annual income, years at current job, residence, debt payment history, current debt obligations and long term debt obligations. Issuers may assign different weights to these criteria to compute a credit score.

A behavior score is another statistical measure used by issuers to better manage accounts, thereby attempting to maximize profit earned per account. The behavior score can include more than 50 different characteristics, including: extent of monthly payments, promptness of payment, use of card for purchases or cash advances, size and type of purchases and types of spending categories among others.

Offering the installment plans to the purchaser typically includes displaying signals indicative of the installment plans. For example, as shown in Fig. 11, a card reader of a POS terminal has a display region 372 that shows text indicating monthly payment amounts and a number of installments for each of three installment plans. To select one of the three installment plans, the purchaser would press a corresponding number on a keypad 374. To reject

all installment plans, the purchaser would press another number key (“1” in Fig. 11) indicating that the purchase price will be applied to the account in one charge instead of in several installment charges.

When an installment plan is selected and transmitted to the central controller, the central controller calculates the amount of the corresponding installments based on purchase price, the interest rate and the number of installments. Financial calculations of this type are well known, and described in Chapter Three of “Principles of Corporate Finance, Fourth Edition”, by Richard A. Brealey and Stewart C. Myers, incorporated herein by reference as part of the present disclosure. An installment appears as a charge on subsequent bills until all installments have been paid. The first installment may appear on the next bill (e.g., next month), or may alternatively appear after a predetermined “grace period” has elapsed. For example, it may be desirable that installment payments begin six months after a corresponding transaction.

Many accounts have a minimum payment amount that a purchaser must pay each billing cycle. In some embodiments, the minimum payment amount may be increased by the amount of each billed installment. Consequently, the credit card issuer is assured that both the original minimum payment amount and the installment are received each billing cycle.

Referring to Fig. 12, an exemplary bill 400 for account number “1111-1111-1111-1111” is illustrated. The bill 400 includes charges 402, 404 and 406, of which the charge 406 is an installment charge. The bill further includes a minimum payment amount 408, which is the sum of the amount 410 of the installment charge 406 and an “original” minimum payment amount 412 due without any installment charges.

Typically, a purchaser receives a bill and submits payment therefor. Each installment payment that the purchaser makes is recorded, allowing the central controller to

determine (i) the number of installments remaining, and thus (ii) when installment payments may no longer be requested. For example, upon receiving an indication that an installment has been received, the central controller may increment the number of payments made 144 (Fig. 5E) of the installment payments database (Figs. 4 and 5E).

5                   In other embodiments of the present invention, there may be rewards and/or “upsells” (purchase upgrade) offered to the purchaser in exchange for selecting an installment plan. In general, it may be desirable to offer a reward or upsell to a purchaser as an incentive to select an installment plan instead of paying the purchase price at once. For example, a purchaser may be offered a discount (rebate) off the purchase price if an installment plan is selected. It will  
10                   be understood that although a discount may be applied to a purchase price, and the purchaser thus pays a reduced purchase price, the merchant would typically be credited with the original (not reduced) purchase price. Alternatively, the purchaser may be offered a cash payment from a cash register, frequent flyer miles or a product related to the purchased product in exchange for selecting an installment plan. In some embodiments, the offered reward or upsell may be based  
15                   on the purchase price, the purchaser, and/or an item purchased. In other embodiments, the offered reward or upsell is predetermined, regardless of other factors.

                  Fig. 13 illustrates a process 420 for determining and offering a rebate to a purchaser. The central controller transmits installment plans to the POS terminal (step 422). Each installment plan has a corresponding rebate associated therewith. For example, a first  
20                   installment plan may have a corresponding \$5 rebate, and a second installment plan has a corresponding \$20 rebate. The purchaser selects an installment plan, and thereby selects the corresponding rebate (step 424). The purchase price is decremented by the corresponding rebate (step 426), and the central controller then authorizes use of the selected installment plan to repay

the decremented purchase price (step 428). Alternatively, rather than the steps 426 and 428, a “second transaction” may be generated which indicates that purchaser is due a refund, and the purchaser is given “cash back” from the POS terminal. The central controller then authorizes use of the selected installment plan to repay the purchase price.

5                    Fig. 14 illustrates a process 440 for determining and offering an upsell to a purchaser. The POS terminal determines, based on the purchase, an upsell to offer (step 442). For example, if a purchase includes a stereo, the upsell may be a five-year warranty for the stereo. A system for determining and offering upsells is disclosed in co-pending Patent Application No. 08/920,116, attorney docket no. WD2-97-054, entitled “METHOD AND  
10       SYSTEM FOR PROCESSING SUPPLEMENTARY PRODUCT SALES AT A POINT-OF-SALE TERMINAL”, filed on August 26, 1997.

                    The POS terminal receives installment plans (step 444), and displays, for each installment plan, installment amounts that are due for (i) the purchase, and (ii) the purchase and upsell combination (step 446). For example, the POS terminal may display:

15       With installment plan A:       stereo = \$10 per month;       stereo and warranty = \$11 per month  
             With installment plan B:       stereo = \$5 per month;       stereo and warranty = \$6 per month

                    A price of the upsell may be fixed or based on the selected installment plan. The upsell price may also be a price that causes the installment amount of the purchase-upsell  
20       combination to be an integral dollar amount, a multiple of five dollars, or any other desired value. The upsell price thus affects the installment amounts of the purchase-upsell combinations, and may be calculated in the same manner as described above. The purchaser selects an installment plan and whether the upsell is also desired (step 448). If the upsell is desired (step



450), then the purchase price is incremented by the upsell price (step 452). Use of the selected installment plan to repay the purchase price is authorized (step 456), as described above.

Rewards and upsells may be offered to the purchaser in exchange for completing all payments for an installment plan, instead of prepaying the balance or defaulting on an

installment payment. Fig. 15 illustrates a process 460 for providing frequent flyer miles to such a purchaser paying in installments. When an installment is received (step 462), a frequent flyer reward is increased, based on the number of payments made (step 464). For example, each payment made may increase the reward by 100 frequent flyer miles, or may double the number of accumulated frequent flyer miles. Alternatively, the initial payments may increase the reward by small amounts, or not at all, and only the last payment increases, or determines, the reward.

If the purchaser desires to receive any of the accumulated frequent flyer miles (step 466), the reward is issued (step 468) and in turn reduced to zero (step 470). If any installment payments remain due (step 472), the central controller waits to receive subsequent installments (step 462). If no payments remain, any reward remaining is issued to the purchaser (step 474).

Although the present invention has been described with respect to a preferred embodiment thereof, those skilled in the art will understand that various substitutions may be made to those embodiments described herein without departing from the spirit and scope of the present invention. For example, it will be understood that all of the installment payments which are due need not be equal.

What is claimed is:

- 1 1. A method for providing installment plan options, comprising:
  - 2 receiving a purchase price and a financial account identifier, the financial account
  - 3 identifier specifying a financial account;
  - 4 generating an installment plan identifier defining an installment plan for payment of the
  - 5 purchase price, the installment plan identifier being based on at least one of the purchase price
  - 6 and the financial account identifier; and
  - 7 transmitting the installment plan identifier.
- 1 2. The method of claim 1, further comprising:
  - 2 receiving a selection signal indicative of whether to accept the installment plan; and
  - 3 if the selection signal indicates acceptance of the installment plan, authorizing use of the
  - 4 installment plan for the financial account.
- 1 3. The method of claim 2, further comprising:
  - 2 adjusting the purchase price if the selection signal indicates acceptance of the installment
  - 3 plan, wherein the installment plan is thereby for payment of the adjusted purchase price.
- 1 4. The method of claim 1, wherein the step of generating an installment plan identifier
  - 2 comprises

3 generating a plurality of installment plan identifiers, each defining an installment plan for  
4 payment of the purchase price, the plurality of installment plan identifiers being based on at least  
5 one of the purchase price and the financial account identifier;

6 and wherein the step of transmitting comprises

7 transmitting the plurality of installment plan identifiers.

1 5. The method of claim 4, further comprising:

2 receiving a selection signal indicative of whether to accept any one of the plurality of  
3 installment plans; and

4 if the selection signal indicates acceptance of one of the plurality of installment plans,  
5 authorizing use of the accepted installment plan for the financial account.

1 6. The method of claim 1, further comprising:

2 determining whether to allow installment payments on the purchase price;

3 and wherein the step of generating the installment plan identifier is performed only if  
4 installment payments on the purchase price are allowed.

1 7. The method of claim 6, wherein the step of determining whether to allow installment  
2 payments comprises:

3 determining whether to allow installment payments, based on at least one of the purchase  
4 price and the financial account identifier.

1 8. The method of claim 6, wherein the step of determining whether to allow installment  
2 payments comprises:  
3 comparing the purchase price to a predetermined amount; and  
4 determining to allow installment payments only if the purchase price exceeds the  
5 predetermined amount.

1 9. The method of claim 1, further comprising:  
2 determining whether application of the purchase price to the financial account is  
3 authorized;  
4 and wherein the step of generating the installment plan identifier is performed only if  
5 application of the purchase price is authorized.

1 10. The method of claim 1, further comprising:  
2 receiving a merchant identifier indicating a merchant from which the purchase price and  
3 the financial account identifier were received; and  
4 crediting the purchase price to the merchant.

1 11. The method of claim 1, further comprising:  
2 determining an upsell to offer;  
3 generating an upsell identifier defining the upsell to offer; and  
4 transmitting the upsell identifier.

1 12. The method of claim 11, further comprising:

2 receiving a response signal indicating whether the upsell was accepted.

1 13. The method of claim 12, further comprising:

2 determining an upsell price; and

3 applying the purchase price to the financial account if the upsell was accepted.

1 14. The method of claim 13, further comprising:

2 receiving a merchant identifier indicating a merchant from which the purchase price and

3 the financial account identifier were received; and

4 crediting the upsell price to the merchant.

1 15. The method of claim 11, wherein the step of determining an upsell to offer comprises

2 determining an upsell to offer based on at least one of the purchase price and the financial

3 account identifier.

1 16. The method of claim 1, wherein the financial account identifier specifies a credit card

2 account.

1 17. The method of claim 1, wherein the installment plan identifier is based on an average

2 number of transactions over a predetermined period.

1 18. The method of claim 1, wherein the installment plan identifier is based on an account

2 holder behavior score.

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1 19. The method of claim 1, wherein the installment plan identifier is based on an account  
2 holder profitability score.

1 20. The method of claim 1, wherein the installment plan identifier is based on an account  
2 holder credit score.

1 21. The method of claim 1, wherein the installment plan identifier is based on an account  
2 holder performance score.

1 22. The method of claim 1, wherein the installment plan identifier is based on preference data  
2 generated by an account holder, the preference data representing finance option preferences.

1 23. An apparatus for providing installment plan options, comprising:  
2 a storage device; and  
3 a processor connected to the storage device,  
4 the storage device storing  
5 a program for controlling the processor;  
6 the processor operative with the program to  
7 receive a purchase price and a financial account identifier, the financial account  
8 identifier specifying a financial account;

9                   generate an installment plan identifier defining an installment plan for payment of  
10 the purchase price, the installment plan identifier being based on at least one of the purchase  
11 price and the financial account identifier; and  
12                   transmit the installment plan identifier.

1   24.   The apparatus of claim 23, wherein the processor is further operative with the program  
2   to:  
3       receive a selection signal indicative of whether to accept the installment plan; and  
4       if the selection signal indicates acceptance of the installment plan, authorize use of the  
5   installment plan for the financial account.

1   25.   The apparatus of claim 24, wherein the processor is further operative with the program  
2   to:  
3       adjust the purchase price if the selection signal indicates acceptance of the installment  
4   plan, wherein the installment plan is thereby for payment of the adjusted purchase price.

1   26.   The apparatus of claim 23, wherein the processor is further operative with the program  
2   to:  
3       generate a plurality of installment plan identifiers, each defining an installment plan for  
4   payment of the purchase price, the plurality of installment plan identifiers being based on at least  
5   one of the purchase price and the financial account identifier; and  
6       transmit the plurality of installment plan identifiers.

1 27. The apparatus of claim 26, wherein the processor is further operative with the program  
2 to:  
3 receive a selection signal indicative of whether to accept any one of the plurality of  
4 installment plans; and  
5 if the selection signal indicates acceptance of one of the plurality of installment plans,  
6 authorize use of the accepted installment plan for the financial account.

1 28. The apparatus of claim 23, wherein the processor is further operative with the program  
2 to:  
3 determine whether to allow installment payments on the purchase price;  
4 and wherein processor generates the installment plan identifier only if installment  
5 payments on the purchase price are allowed.

1 29. The apparatus of claim 28, wherein the processor is further operative with the program  
2 to:  
3 determine whether to allow installment payments, based on at least one of the purchase  
4 price and the financial account identifier.

1 30. The apparatus of claim 28, wherein the processor is further operative with the program  
2 to:  
3 compare the purchase price to a predetermined amount; and  
4 determine to allow installment payments only if the purchase price exceeds the  
5 predetermined amount.



1 31. The apparatus of claim 23, wherein the processor is further operative with the program

2 to:

3 determine whether application of the purchase price to the financial account is  
4 authorized;

5 and wherein processor generates the installment plan identifier only if application of the  
6 purchase price is authorized.

1 32. The apparatus of claim 23, wherein the processor is further operative with the program

2 to:

3 receive a merchant identifier indicating a merchant from which the purchase price and the  
4 financial account identifier were received; and

5 credit the purchase price to the merchant.

1 33. The apparatus of claim 23, wherein the processor is further operative with the program

2 to:

3 determine an upsell to offer;

4 generate an upsell identifier defining the upsell to offer; and

5 transmit the upsell identifier.

1 34. The apparatus of claim 33, wherein the processor is further operative with the program

2 to:

3 receive a response signal indicating whether the upsell was accepted.

1 35. The apparatus of claim 34, wherein the processor is further operative with the program  
2 to:  
3 determine an upsell price; and  
4 apply the purchase price to the financial account if the upsell was accepted.

1 36. The apparatus of claim 35, wherein the processor is further operative with the program  
2 to:  
3 receive a merchant identifier indicating a merchant from which the purchase price and the  
4 financial account identifier were received; and  
5 credit the upsell price to the merchant.

1 37. The apparatus of claim 33, wherein the processor is further operative with the program  
2 to:  
3 determine an upsell to offer based on at least one of the purchase price and the financial  
4 account identifier.

1 38. The apparatus of claim 23, wherein the financial account identifier specifies a credit card  
2 account.

1 39. The apparatus of claim 23, wherein the installment plan identifier is based on an average  
2 number of transactions over a predetermined period.

1 40. The apparatus of claim 23, wherein the installment plan identifier is based on an account  
2 holder behavior score.

1 41. The apparatus of claim 23, wherein the installment plan identifier is based on an account  
2 holder profitability score.

1 42. The apparatus of claim 23, wherein the installment plan identifier is based on an account  
2 holder credit score.

1 43. The apparatus of claim 23, wherein the installment plan identifier is based on an account  
2 holder performance score.

1 44. The apparatus of claim 23, wherein the installment plan identifier is based on preference  
2 data generated by an account holder, the preference data representing finance option preferences.

1 45. A method for providing installment plan options at a terminal, comprising:  
2 generating a purchase price;  
3 generating a financial account identifier for specifying a financial account;  
4 transmitting the purchase price and the financial account identifier;  
5 receiving an installment plan identifier defining an installment plan for payment of the  
6 purchase price, the installment plan identifier being responsive to at least one of the transmitted  
7 purchase price and financial account identifier;  
8 generating a selection signal indicative of whether to accept the installment plan; and

9 transmitting the selection signal.

1 46. The method of claim 45, further comprising:

2 generating a merchant identifier; and

3 transmitting the merchant identifier.

1 47. The method of claim 46, further comprising:

2 determining an upsell to offer.

1 48. The method of claim 47, wherein the step of determining the upsell to offer comprises:

2 receiving an upsell identifier defining the upsell to offer.

1 49. The method of claim 47, wherein the step of determining the upsell to offer comprises:

2 generating an upsell identifier defining the upsell to offer, the upsell identifier being

3 generated in dependence on at least one of the purchase price and the financial account identifier.

1 50. The method of claim 47, further comprising:

2 displaying a signal indicative of the upsell to offer.

1 51. The method of claim 45, further comprising:

2 displaying a signal indicative of the installment plan.

1 52. The method of claim 45, wherein the step of receiving an installment plan identifier  
2 comprises:  
3 receiving a plurality of installment plan identifiers, each defining an installment plan for  
4 payment of the purchase price, the plurality of installment plan identifiers being responsive to the  
5 transmitted purchase price and financial account identifier;  
6 and wherein the selection signal is indicative of whether to accept any one of the plurality  
7 of installment plans.

1 53. The method of claim 45, wherein the financial account identifier specifies a credit card  
2 account.

1 54. The method of claim 45, further comprising:  
2 determining whether use of an installment plan for the financial account is authorized;  
3 and  
4 if use of the installment plan is authorized,  
5 determining a periodic payment amount defined by the installment plan, and  
6 applying the periodic payment amount to a balance of the financial account.

1 55. The method of claim 54, further comprising:  
2 printing indicia indicative of the periodic payment amount.

1 56. The method of claim 54, further comprising:

2           calculating a balance due by adding the periodic payment amount to a predetermined  
3   amount; and  
4           printing indicia indicative of the balance due.

1   57.    An apparatus for providing installment plan options at a terminal, comprising:  
2           a storage device; and  
3           a processor connected to the storage device,  
4           the storage device storing  
5                   a program for controlling the processor;  
6           the processor operative with the program to  
7                   generate a purchase price;  
8                   generate a financial account identifier for specifying a financial account;  
9                   transmit the purchase price and the financial account identifier;  
10                  receive an installment plan identifier defining an installment plan for payment of  
11   the purchase price, the installment plan identifier being responsive to at least one of the  
12   transmitted purchase price and financial account identifier;  
13                  generate a selection signal indicative of whether to accept the installment plan;  
14   and  
15                  transmit the selection signal.

1   58.    The apparatus of claim 57, wherein the processor is further operative with the program  
2   to:  
3           generate a merchant identifier; and

4 transmit the merchant identifier.

1 59. The apparatus of claim 58, wherein the processor is further operative with the program  
2 to:  
3 determine an upsell to offer.

1 60. The apparatus of claim 59, wherein the processor is further operative with the program  
2 to:  
3 receive an upsell identifier defining the upsell to offer.

1 61. The apparatus of claim 59, wherein the processor is further operative with the program  
2 to:  
3 generate an upsell identifier defining the upsell to offer, the upsell identifier being  
4 generated in dependence on at least one of the purchase price and the financial account identifier.

1 62. The apparatus of claim 59, wherein the processor is further operative with the program  
2 to:  
3 display a signal indicative of the upsell to offer.

1 63. The apparatus of claim 57, wherein the processor is further operative with the program  
2 to:  
3 display a signal indicative of the installment plan.

1 64. The apparatus of claim 57, wherein the processor is further operative with the program  
2 to:  
3 receive a plurality of installment plan identifiers, each defining an installment plan for  
4 payment of the purchase price, the plurality of installment plan identifiers being responsive to the  
5 transmitted purchase price and financial account identifier;  
6 and wherein the selection signal is indicative of whether to accept any one of the plurality  
7 of installment plans.

1 65. The apparatus of claim 57, wherein the financial account identifier specifies a credit card  
2 account.

1 66. The apparatus of claim 57, wherein the processor is further operative with the program  
2 to:  
3 determine whether use of an installment plan for the financial account is authorized; and  
4 if use of the installment plan is authorized,  
5 determine a periodic payment amount defined by the installment plan, and  
6 apply the periodic payment amount to a balance of the financial account.

1 67. The apparatus of claim 66, further comprising:  
2 a printer;  
3 and wherein the processor is further operative with the program to:  
4 print indicia indicative of the periodic payment amount.



1     68.     The apparatus of claim 66, further comprising:  
2             a printer;  
3             and wherein the processor is further operative with the program to:  
4             calculate a balance due by adding the periodic payment amount to a predetermined  
5     amount; and  
6             print indicia indicative of the balance due.

## ABSTRACT OF THE DISCLOSURE

A central controller receives from a POS terminal a purchase price and a financial account identifier. The financial account identifier specifies a financial account, such as a credit card account. The central controller, in turn, generates one or more installment plan identifiers  
5 defining installment plans for payment of the purchase price. The installment plan identifiers are based on the purchase price and/or the financial account identifier. For example, certain accounts or certain high purchase prices may merit preferred installment plans. The installment plan identifiers are transmitted to the POS terminal. A purchaser at the POS terminal selects whether he would like to pay for his purchase in installments and, if so, using which installment  
10 plan. The POS terminal generates a selection signal indicative of whether to accept any of the installment plans, and transmits the selection signal to the central controller. The central controller receives the selection signal. If the selection signal indicates acceptance of any installment plan, use of the accepted installment plan for the financial account is authorized. Thereafter, bills are generated which reflect installment charges to be paid.

FIG. 1 is a block diagram of a system 10. The system 10 includes a central controller 12 and three stores: STORE 1 14, STORE 2 16, and STORE 3 18. The central controller 12 is connected to each of the stores 14, 16, and 18.

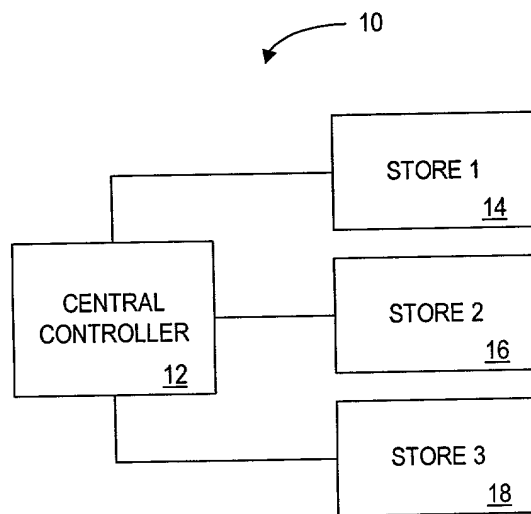


FIG. 1

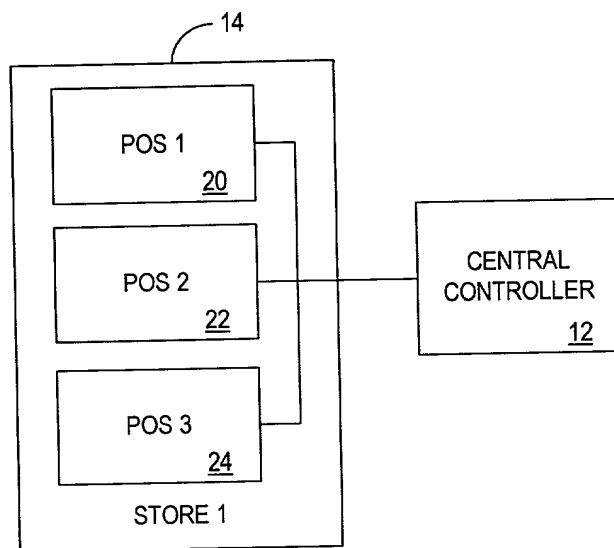


FIG. 2

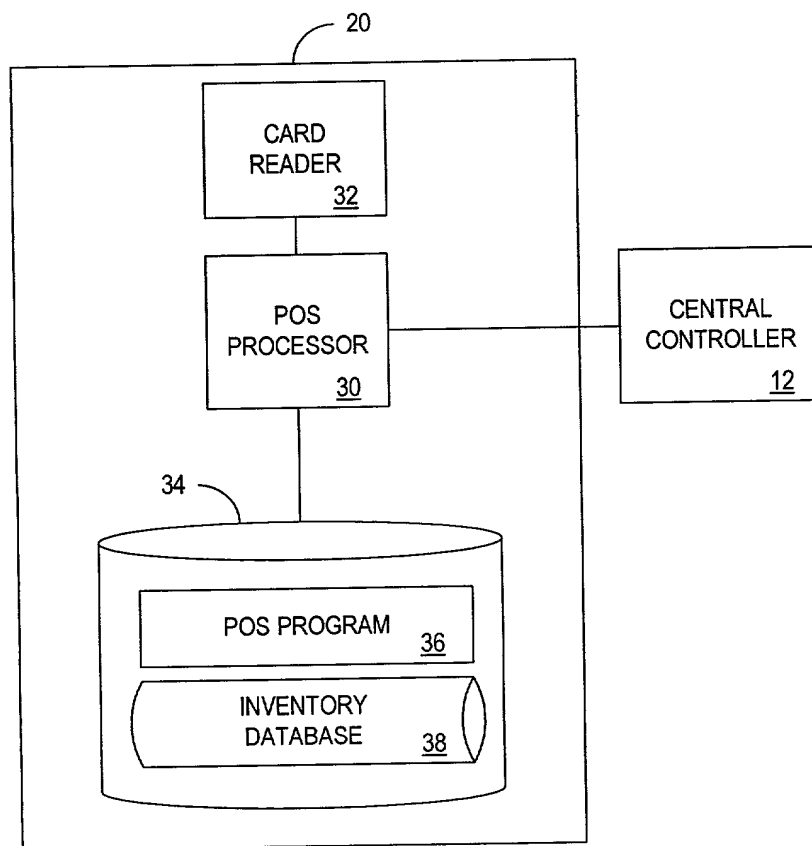


FIG. 3

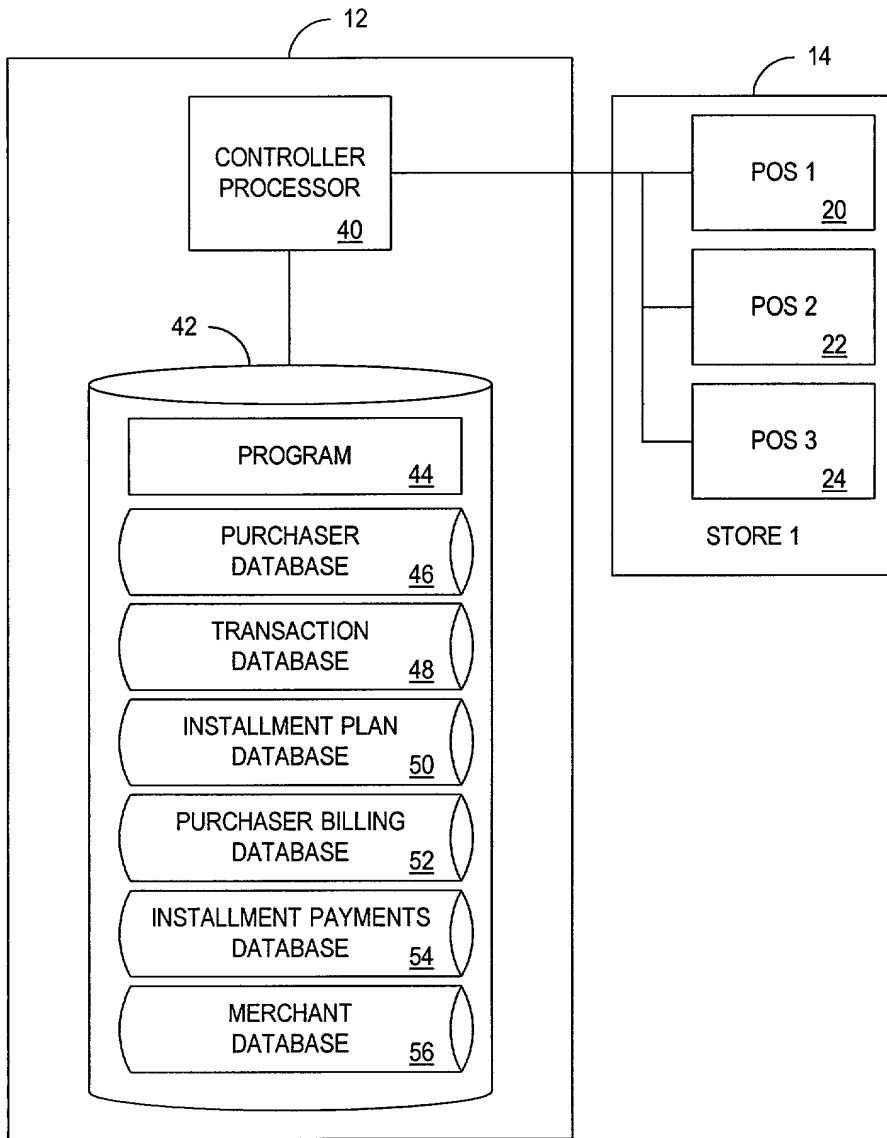


FIG. 4

FIG. 5A is a schematic diagram of a credit card account table 46. The table 46 includes columns for CREDIT CARD ACCOUNT NUMBER 60, NAME 61, ADDRESS 62, BALANCE LIMIT 63, and BALANCE 64. The table 46 includes three rows of data. The first row includes the CREDIT CARD ACCOUNT NUMBER 1111-1111-1111-1111, the NAME BILL SMITH, the ADDRESS 123 RED ST. ANYWHERE, USA, the BALANCE LIMIT \$2,000, and the BALANCE \$1,016.94. The second row includes the CREDIT CARD ACCOUNT NUMBER 1111-2222-2222-2222, the NAME SUSAN GREEN, the ADDRESS 456 BLUE ST. ANYWHERE, USA, the BALANCE LIMIT \$4,000, and the BALANCE \$3,120.48. The third row includes the CREDIT CARD ACCOUNT NUMBER 1111-3333-3333-3333, the NAME ELIOT BROWN, the ADDRESS 678 GRAY DR. ANYWHERE, USA, the BALANCE LIMIT \$1,000, and the BALANCE \$90.32.

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CREDIT CARD ACCOUNT NUMBER 60	NAME 61	ADDRESS 62	BALANCE LIMIT 63	BALANCE 64
1111-1111- 1111-1111	BILL SMITH	123 RED ST. ANYWHERE, USA	\$2,000	\$1,016.94
1111-2222- 2222-2222	SUSAN GREEN	456 BLUE ST. ANYWHERE, USA	\$4,000	\$3,120.48
1111-3333- 3333-3333	ELIOT BROWN	678 GRAY DR. ANYWHERE, USA	\$1,000	\$90.32

FIG. 5A

TRANSACTION IDENTIFIER	CREDIT CARD ACCOUNT NUMBER	TRANSACTION DATE	INSTALLMENT PLAN IDENTIFIER	MERCHANT IDENTIFIER	PURCHASE PRICE
130112	1111-8888-8888-8888	8/23/97	NONE	13456	\$62.29
130113	1111-5555-5555-5555	8/23/97	A	12421	\$82.51
130456	1111-1111-1111-1111	8/23/97	B	12456	\$435.97

FIG. 5B



FIG. 5C is a diagram of a table 50 showing installment plan identifiers, terms, interest rates, and required purchase prices. The table includes three rows of data (A, B, and C) and four columns of information. Reference numerals 90, 92, and 94 point to the first three rows, and 50 points to the table header.

90	50			
	INSTALLMENT PLAN IDENTIFIER 96	TERM 98	INTEREST RATE 100	REQUIRED PURCHASE PRICE 102
	A	12 MONTHS	16%	BETWEEN \$250 AND \$1,000
	B	24 MONTHS	15%	BETWEEN \$250 AND \$1,000
94	C	36 MONTHS	13%	BETWEEN \$250 AND \$1,000

FIG. 5C

108

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114

CREDIT CARD ACCOUNT NUMBER 1111-1111-1111-1111				
TRANSACTION IDENTIFIER <u>116</u>	TRANSACTION DATE <u>118</u>	BILLABLE CHARGE <u>120</u>	MERCHANT IDENTIFIER <u>122</u>	TRANSACTION DESCRIPTION <u>124</u>
128003	8/21/97	\$32.81	12345	MISC. GROCERIES
128116	8/22/97	\$12.92	12348	GASOLINE
130456-B-1	8/28/97	\$21.14	NA	COLOR TELEVISION 456 PAYMENT 1/24

FIG. 5D

54

CREDIT CARD ACCOUNT NUMBER <sup>136</sup>	PURCHASE PRICE <sup>138</sup>	TRANSACTION IDENTIFIER <sup>140</sup>	INSTALLMENT PLAN IDENTIFIER <sup>142</sup>	NUMBER OF PAYMENTS MADE <sup>144</sup>	INSTALLMENT AMOUNT <sup>146</sup>
1111-3333- 3333-3333	\$221.47	118271	A	9	\$20.09
1111-2222- 2222-2222	\$482.61	128497	A	4	\$43.79
1111-1111- 1111-1111	\$435.97	130456	B	0	\$21.14

FIG. 5E

FIG. 5F is a diagram of a table 56 illustrating merchant information. The table 56 includes a first column 150, a second column 152, and a third column 154. The first column 150 includes merchant identifiers 156, the second column 152 includes merchant names 158, and the third column 154 includes addresses 160.

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MERCHANT IDENTIFIER 156	MERCHANT NAME 158	ADDRESS 160
12456	RETAIL STORE X	4820 RED ST. ANYWHERE, USA
12457	GROCER Y	7221 AZURE LA. ANYWHERE, USA
12458	GASOLINE SUPPLIER Z	4281 GREEN STRIP DR. ANYWHERE, USA

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152  
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FIG. 5F

200

CREDIT CARD ACCOUNT NUMBER	NAME	ADDRESS	BALANCE LIMIT	BALANCE
1111-1111-1111-1111	BILL SMITH	123 RED ST. ANYWHERE, USA	\$2,000	\$1,016.94

210

TRANSACTION IDENTIFIER	CREDIT CARD ACCOUNT NUMBER	TRANSACTION DATE	INSTALLMENT PLAN IDENTIFIER	MERCHANT IDENTIFIER	PURCHASE PRICE
130456	1111-1111-1111-1111	8/23/97	B	123456	\$435.97

215

MERCHANT IDENTIFIER	MERCHANT NAME	ADDRESS
12456	RETAIL STORE X	4820 RED ST. ANYWHERE, USA

220

INSTALLMENT PLAN IDENTIFIER	TERM	INTEREST RATE	REQUIRED PURCHASE PRICE
B	24 MONTHS	15%	BETWEEN \$250 AND \$1,000

230

CREDIT CARD ACCOUNT NUMBER 1111-1111-1111-1111				
TRANSACTION IDENTIFIER	TRANSACTION DATE	BILLABLE CHARGE	MERCHANT IDENTIFIER	TRANSACTION DESCRIPTION
130456-B-1	8/28/97	\$21.14	NA	COLOR TELEVISION 456 PAYMENT 1/24

240

CREDIT CARD ACCOUNT NUMBER	PURCHASE PRICE	TRANSACTION IDENTIFIER	INSTALLMENT PLAN IDENTIFIER	NUMBER OF PAYMENTS MADE	INSTALLMENT AMOUNT
1111-1111-1111-1111	\$435.97	130456	B	0	\$21.14

FIG. 6

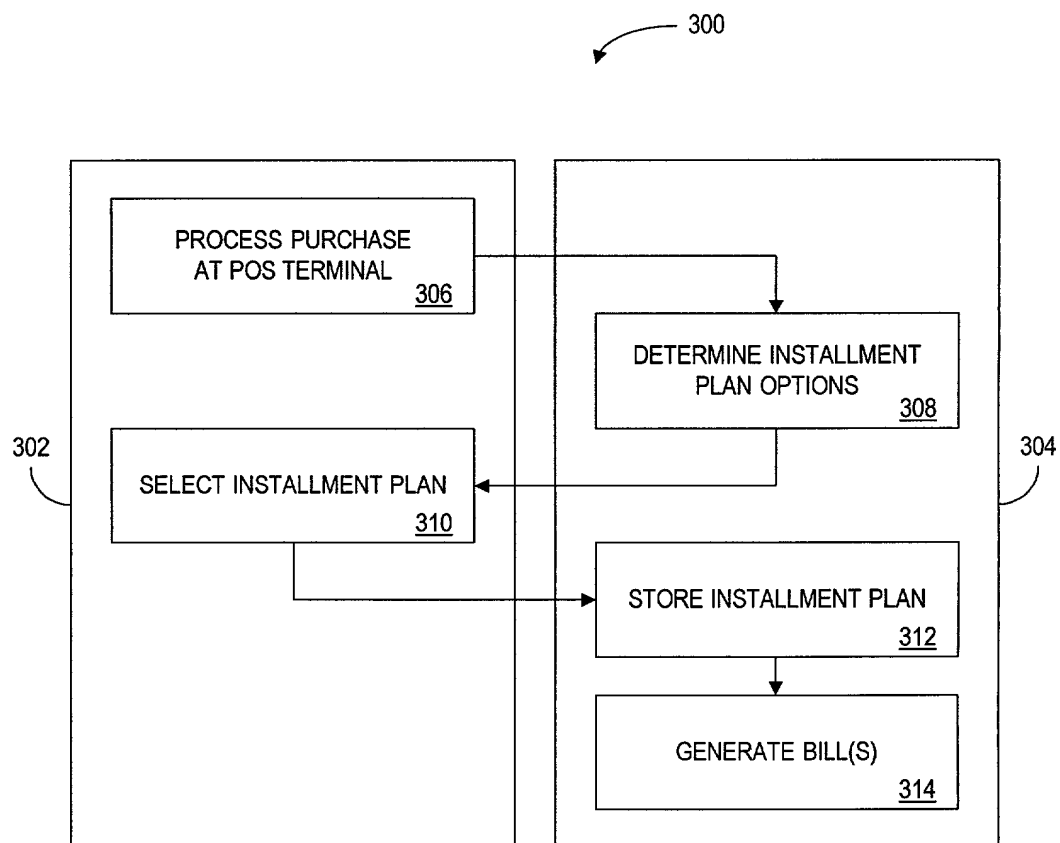


FIG. 7

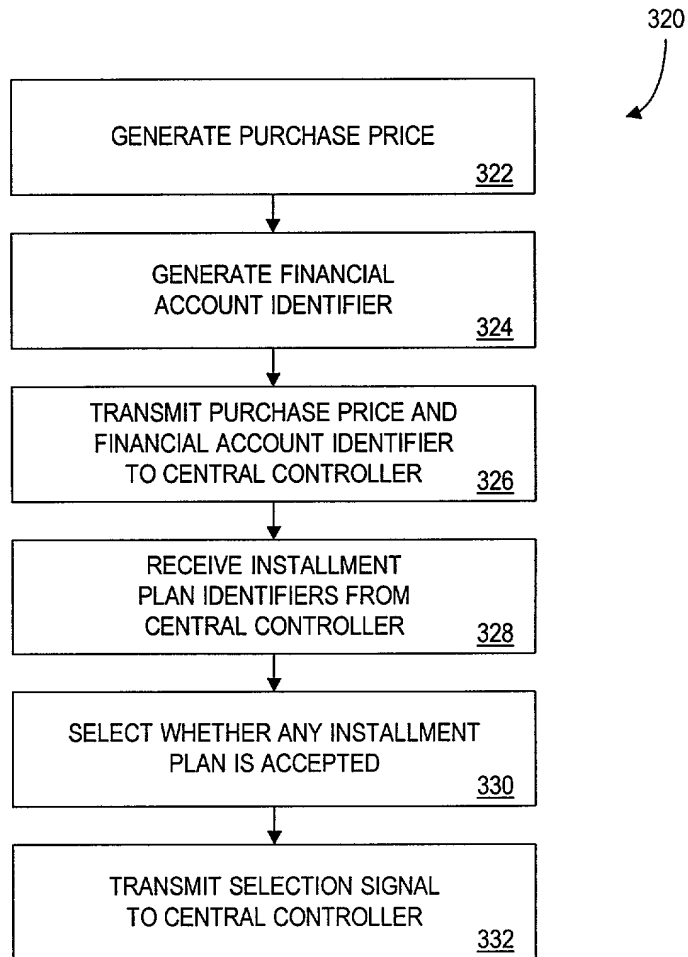


FIG. 8

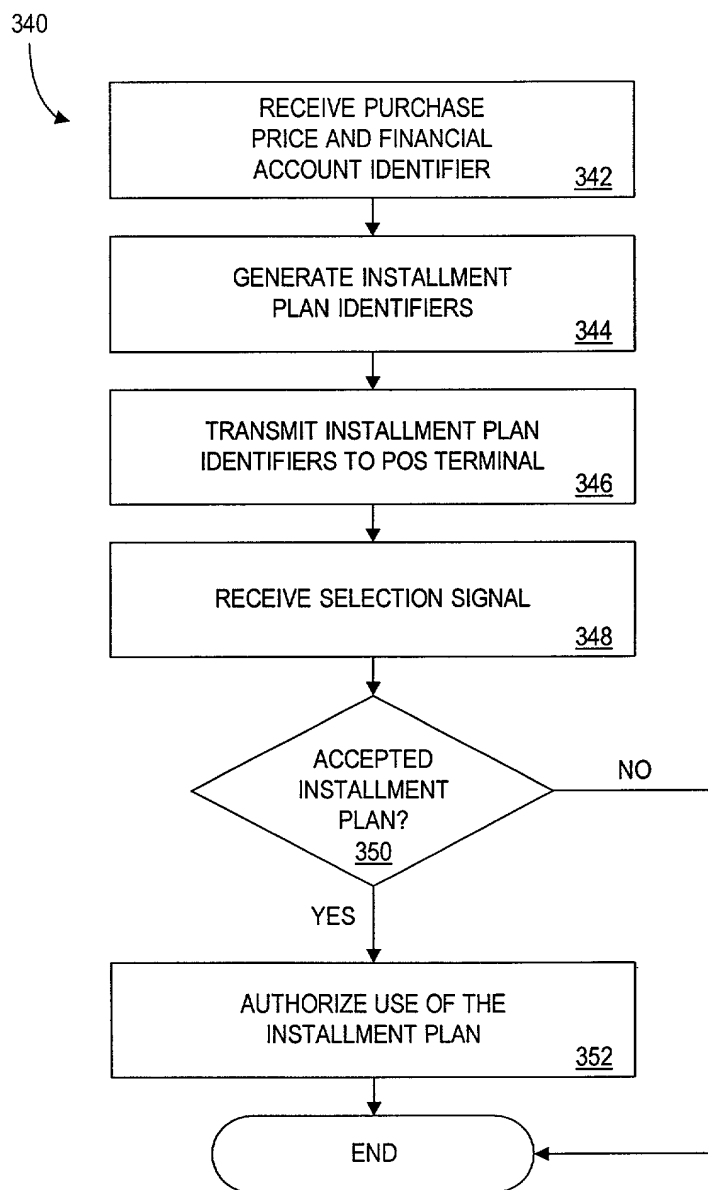


FIG. 9



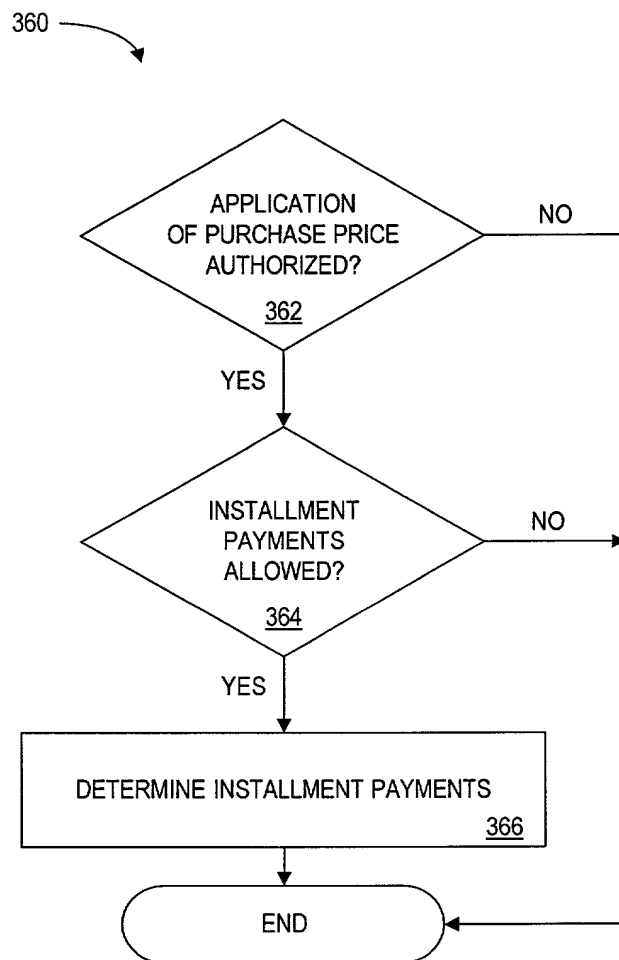


FIG. 10

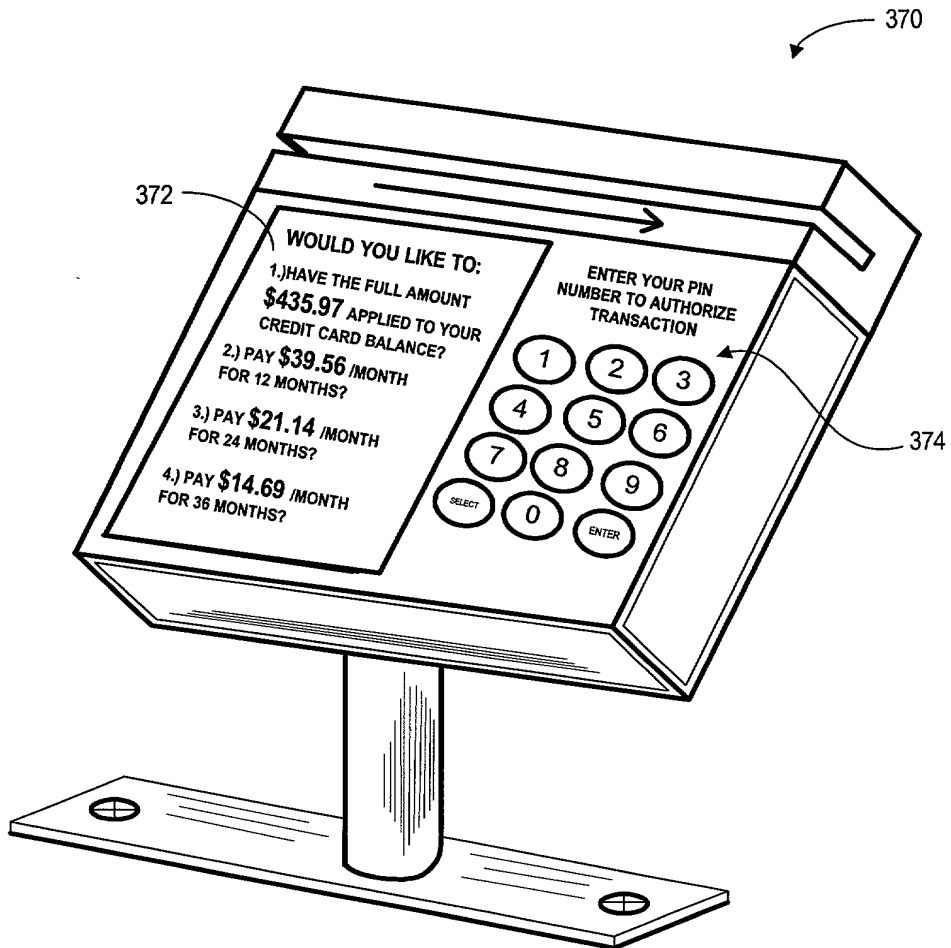


FIG. 11

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**STATEMENT**

DATE **9/15/97**      FINANCE PLAN MINIMUM PAYMENT: **\$21.14**      410  
CREDIT LINE BALANCE      412  
MINIMUM PAYMENT: **\$24.00**      412  
TOTAL MINIMUM PAYMENT DUE: **\$45.14**      412

PAYMENT DUE: **10/1/97**      408

CUSTOMER: **BILL SMITH**  
ACCOUNT NUMBER: **1111-1111-1111-1111**

**YOUR CHARGES THIS PERIOD:**

<b>128003</b>	<b>8/21/97 SHOP RITE</b>	MISC. GROCERIES	<b>\$32.81</b>	402
<b>128116</b>	<b>8/22/97 EXXON</b>	GASOLINE	<b>\$12.92</b>	404
<b>130456-B-1</b>	<b>8/28/97 FINANCE PLAN</b>	TELEVISION 456 PAYMENT 1/24	<b>\$21.14</b>	406
<b>TOTAL</b>			<b>\$66.87</b>	

FIG. 12

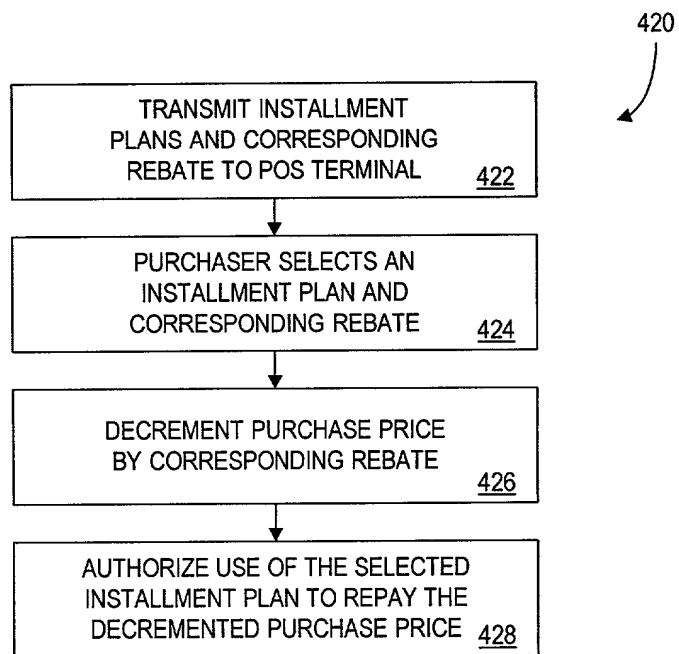


FIG. 13

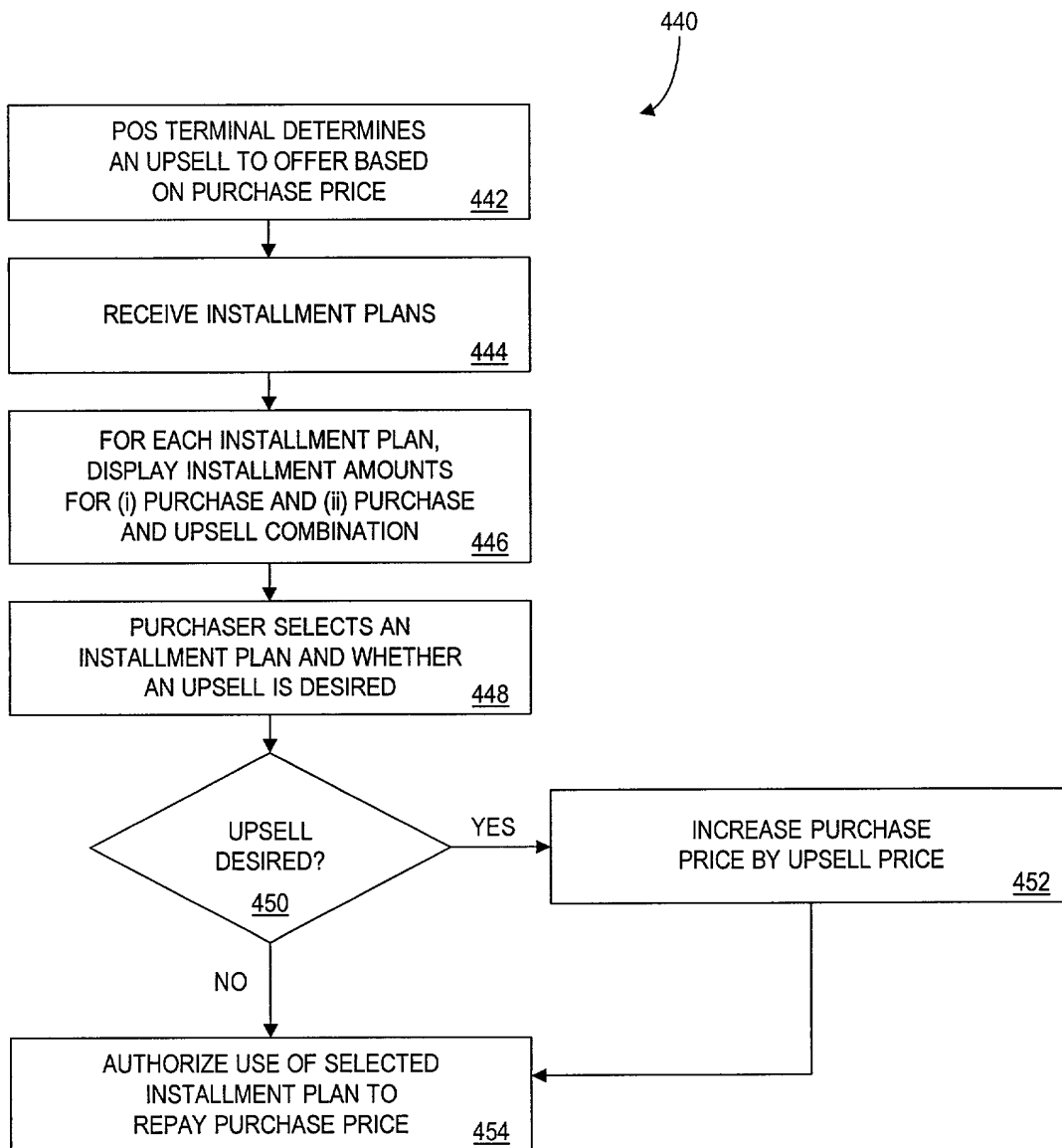


FIG. 14

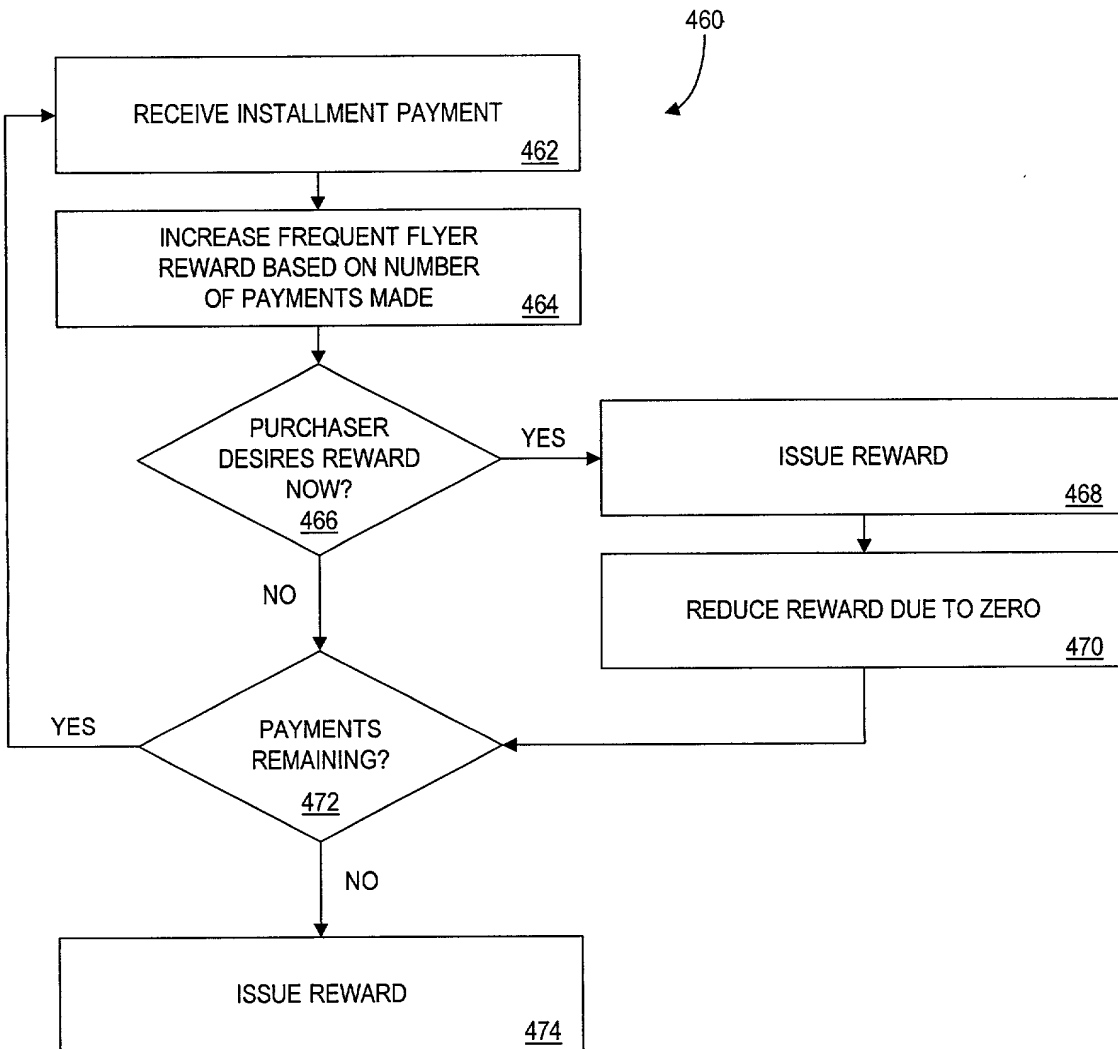


FIG. 15

## COMBINED DECLARATION AND POWER OF ATTORNEY

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship is as stated below next to my name(s),

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

**METHOD AND APPARATUS FOR PROVIDING AND PROCESSING INSTALLMENT PLANS AT A TERMINAL**

the specification of which (*check one*)

- ☒ is attached hereto; or  
☐ was filed on \_\_\_\_\_ as application serial no. \_\_\_\_\_ and was amended on \_\_\_\_\_ (if applicable); or  
☐ was described and claimed in international application no. \_\_\_\_\_ filed on \_\_\_\_\_ and as amended on \_\_\_\_\_ (if applicable).

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above, and that it contains a full, clear, concise and exact description of the subject matter for which a patent is sought.

I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, § 1.56(a).

### Prior Application(s)

☐ (Check if applicable) I hereby claim foreign priority benefits under Title 35, United States Code § 119, by checking the box(es) below, any foreign application(s) for patent or inventor's certificate, or PCT International application having a filing date before that of the application on which priority is claimed:

#### Prior Foreign Application(s)

			Priority Claimed?
			<input type="checkbox"/> yes <input type="checkbox"/> no
_____ (Number)	_____ (Country)	_____ (Day/month/year filed)	
			<input type="checkbox"/> yes <input type="checkbox"/> no
_____ (Number)	_____ (Country)	_____ (Day/month/year filed)	

☒ (Check if applicable) I hereby claim the benefit under Title 35, United States Code § 120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code § 112, I acknowledge the duty to disclose material information as defined in the Title 37, Code of Federal Regulations § 1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of the application:

#### Prior U.S. Application(s)

08/920116	26 August 1997	Pending
(Application Number)	(Day/month/year filed)	(Status – Issued, pending, abandoned)
08/822709	21 March 1997	Pending
(Application Number)	(Day/month/year filed)	(Status – Issued, pending, abandoned)

☒ (Check if applicable) In this continuation-in-part application, insofar as the subject matter of any of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code § 112, I acknowledge the duty to disclose material information as defined in the Title 37, Code of Federal Regulations § 1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of the application.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge and the like so made are punishable by fine or imprisonment, or both under § 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

I hereby appoint Jeffrey L. Brandt - Reg. No. 31,490, Robert R. Lech - Reg. No. 37,169 and Dean Alderucci - Reg. No. 40,484 of Walker Digital Corporation, whose address is Five High Ridge Park, Stamford, Connecticut 06905-1326 as my attorneys with full power of substitution and revocation, to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith.

Please address all written correspondence to:

Walker Digital Corporation  
Five High Ridge Park  
Stamford, Connecticut 06905-1326  
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Wherefore I pray that Letters Patent be granted to me for the invention or discovery described and claimed in the foregoing specification and claims, and I hereby subscribe my name to the foregoing specification and claims, declaration, power of attorney, and this petition.

**Full name of sole or first inventor:** Jay S. WALKER

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Post Office Address: same as above

Citizenship: U.S.A.

Inventor's signature 

Date 10/6, 1997

**Full name of second inventor:** James A. JORASCH

Residence: 25 Forest Street, Apt 5G, Stamford, CT 06901

Post Office Address: same as above

Citizenship: U.S.A.

Inventor's signature 

Date 10/6, 1997

**Full name of third inventor:** Andrew S. VAN LUCHENE

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Citizenship: U.S.A.

Inventor's signature 

Date 10/6, 1997